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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,227	04/27/2001	Marco Nahmias Nanni	07040.0083	8378

22852 7590 11/05/2002

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EXAMINER

JOHNSTONE, ADRIENNE C

ART UNIT	PAPER NUMBER
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1733

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DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/843,227

Applicant(s)

NANNI ET AL.

Examiner

Adrienne C. Johnstone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-24 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

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DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

This application is claiming the benefit of a prior filed nonprovisional application under 35 U.S.C. 120, 121, or 365(c). Copendency between the current application and the prior application is required.

Specifically, the filing date of this application is just under 30 months from the foreign priority date and there is no evidence in the file that in parent PCT/EP99/08065 Chapter II was requested in order to maintain pendency of the parent 30 months from the foreign priority date.

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: TIRE INCLUDING FIBER-REINFORCED ELASTOMERIC INTERMEDIATE LAYER BETWEEN BELT STRUCTURE AND TREAD BAND AND METHOD OF MAKING SAME.

4. The disclosure is objected to because of the following informalities: in the insert after the title there is an improper cross-reference to a foreign application (see MPEP 608.01).

Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the

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following is required: the subject matter of claim 9 is not yet in the specification (recited in the specification for the prior art but not for the invention).

Claim Objections

6. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. This method limitation does not further limit the tire structure of claim 1.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 8, 14, 15, 17-19, 22, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

See paragraph 6 above concerning the claim 8 method limitation: it is not clear how this claim further limits the claim 1 tire structure. It appears from the specification (p. 10 lines 3-20) that in claims 14 and 15 the two edge portions each have a substantially constant thickness (otherwise it is not clear how to measure the thicknesses of the central and edge portions for purposes of the claimed comparison between them), but this is not yet clear in the claims. Also, in claim 17 the cords "crisscross each other" only from one layer to the next (see the specification p. 7 lines 24-27 for example) and therefore there must be -- at least two layers -- of the rubberized cord fabric rather than "at least one layer". Further, it appears from the specification (p. 1 lines 15-30) that in claims 18, 19, and 24 the 0 degree layer is excluded -- between the belt structure and the tread band -- rather than excluded from anywhere in the tire, but this is not yet clear in

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the claims; a similar problem exists in claim 22 concerning the excluded "nylon layer". Still further, it appears from the specification (p. 1 line 31 - p. 2 line 29) that in claims 19, 22, and 24 the "rubber sheet" is excluded -- on the underside of the tread band -- rather than excluded from anywhere in the tire and the "underlayer" is a -- tread underlayer --, but this is not yet clear in the claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5, 8-10, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (4,871,004) cited by applicants.

See col. 7 lines 17-69, col. 8 lines 26-34 and 43-46, and col. 9 lines 11-26 concerning the embodiment wherein the aramid fiber-reinforced tire component is the belt overlay 68. As to claim 17, one of ordinary skill in the art would have understood the conventional tire construction disclosed in the reference (col. 8 lines 43-46) for the components other than the belt overlay 68 to include rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane in the belts 66. As to claims 21 and 22, the claims do not require any particular order of the steps and therefore do not distinguish over the completed tire construction noted above.

11. Claims 1-12 and 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application 0 592 218 A1 cited by applicants.

See p. 2 line 16 - p. 14 line 7: one of ordinary skill in the art would have understood the EP '218 radial tire to have basic tire structure such as grooves on the outer surface of the tread

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band. As to claim 17, one of ordinary skill in the art would have understood the EP '218 radial tire to have basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the breaker (belt structure).

12. Claims 1-10 and 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Causa et al. (5,576,104) (equivalent to EP 0 691 218 A2 cited by applicants).

See col. 2 line 1 - col. 4 line 46 and col. 7 line 1 - col. 13 line 59.

13. Claims 1-12 and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Application 4-274903 A (the abstract of which was cited by applicants).

See the abstract and the figure: the exemplary tire is radial (205/60R15), paragraph 0015. As to claim 3, the short fibers may be aramid (paragraph 0008, determined through oral translation). As to claims 5 and 9, the exemplary radial tire cap ply rubber comprises 60% natural rubber, paragraph 0016 (Table 1, determined through oral translation). As to claim 7, the exemplary radial tire cap ply B comprises 8 phr of the short fibers, paragraph 0016 (Table 1, determined through oral translation). As to claim 10, the exemplary radial tire cap ply comprises 50 phr of carbon black, paragraph 0016 (Table 1, determined through oral translation). As to claim 17, one of ordinary skill in the art would have understood the JP '903 radial tire to have basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the belt 2. As to claims 21 and 22, the claims do not require any particular order of the steps and therefore do not distinguish over the completed tire construction noted above.

14. Claims 1, 2, 5-10, 13, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Greiner et al. (3,759,306).

See col. 2 line 44 - col. 6 line 11. As to claims 5 and 9, the exemplary tread underlayer 12b comprises 100% "smoked leaf" (natural rubber) or SBR 1500 (styrene-butadiene rubber).

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15. Claims 1, 2, 4-10, 13, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Masson (3,916,968) (equivalent to French Patent Application 2.215.331 cited by applicants).

See col. 1 line 64 - col. 2 line 51, col. 3 lines 10-42, and col. 5 lines 5-68. As to claims 21 and 22, the claims do not require any particular order of the steps and therefore do not distinguish over the completed tire construction noted above.

16. Claims 1, 2, 4, 5, 8, 9, 11, 12, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Marzocchi (3,772,130).

See col. 4 line 44 - col. 7 line 31 concerning the embodiment of Figure 4. As to claims 11 and 12, the thickness of the fiber-reinforced sheet is 1/32 in (0.8 mm) to 1/8 in (3.2 mm) and preferably 1/16 in (1.6 mm).

17. Claims 1, 2, 4-10, and 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Causa et al. (5,513,683).

See col. 2 line 40 - col. 5 line 62: one of ordinary skill in the art would have understood the Causa et al. '683 to have basic tire structure such as radial orientation of the cords in the single carcass ply 76. As to claim 4, one of ordinary skill in the art would have understood that, absent a teaching to the contrary, the co-extrusion of the tread cap 81 and tread base 81 results in a substantially circumferential orientation of the short fibers in the tread base 81. As to claim 17, one of ordinary skill in the art would have understood the Causa et al. '683 tire to have basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the belts 20,22.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (4,871,004) cited by applicants.

See paragraph 10 above: it would have been obvious to one of ordinary skill in the art to provide as the belts 66 of the conventional tire construction disclosed in the reference (col. 8 lines 43-46) the conventional rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane.

21. Claims 1-12 and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application 0 592 218 A1 cited by applicants.

See paragraph 11 above: it would have been obvious to one of ordinary skill in the art to provide the EP '218 radial tire with basic tire structure such as grooves on the outer surface of the tread band and, with respect to claim 17, basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the breaker (belt structure).

22. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 4-274903 A (the abstract of which was cited by applicants).

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See paragraph 13 above: it would have been obvious to one of ordinary skill in the art to provide the JP '903 radial tire with basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the belt 2.

23. Claims 1, 2, 4-10, and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Causa et al. (5,513,683).

See paragraph 17 above: it would have been obvious to one of ordinary skill in the art to provide the Causa et al. '683 with basic tire structure such as radial orientation of the cords in the single carcass ply 76 and, with respect to claim 17, basic tire structure such as rubberized fabric cords crossing from one layer to the next and angled with respect to the equatorial plane forming the belts 20,22. As to claim 4, it would have been obvious to one of ordinary skill in the art, absent a teaching to the contrary, to provide the substantially circumferential orientation of the short fibers in the tread base 81 that would naturally result from the co-extrusion of the tread cap 81 and tread base 81.

Allowable Subject Matter

24. Claims 14 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

It should be noted that these claims require the presence of a thinner central portion of the layer between the thicker edge portions, which excludes a layer comprising only the two edge portions, with no central portion therebetween.

25. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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It should be noted that this claim requires the presence of a thinner central portion of the layer between the thicker edge portions, which excludes a layer comprising only the two edge portions with no central portion therebetween.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese Patent Applications 63-263104 and 6-191208 anticipate or render obvious at least claim 1 but are considered to be no more pertinent to the instant claims than the prior art applied above by the examiner.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrienne C. Johnstone whose telephone number is (703)308-2059. The examiner can normally be reached on Monday-Friday, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703)308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9311 for regular communications and (703)872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Adrienne C. Johnstone
Primary Examiner
Art Unit 1733

Adrienne Johnstone
November 1, 2002

